

Climate Leader Communities Municipal Decarbonization Commitment and Roadmap



INTRODUCTION

The 2021 Climate Law, established statewide limits on greenhouse gas (GHG) emissions, requiring a reduction of GHG emissions thirty three percent (33%) percent below 1990 levels in calendar year 2025 and a fifty percent (50%) percent reduction by calendar year 2030. The Executive Office of Energy and Environmental Affairs issued the <u>Massachusetts</u> <u>Clean Energy and Climate Plan for 2025 and 2030</u> (CECP) that establishes a framework for meeting these goals, mainly through electrifying non-electric energy uses, decarbonizing the electric grid, and maximizing the efficiency of buildings and transportation.

In accordance with M.G.L.c. 25A §10 (b) Climate Leader Community certification provides a framework for municipalities to pursue these goals in partnership with the Commonwealth of Massachusetts. To become certified, municipalities must:

- 1) Commit to eliminating on-site fossil fuel use by the municipality by 2050
- 2) Develop a roadmap for decarbonizing municipal operations

Municipal Decarbonization Commitment

First, a town or city must demonstrate that it has made a decarbonization commitment. There are several ways in which a municipality can demonstrate this commitment. One way would be a clean energy/climate resolution from Town Meeting or City Council that directs the community to take some sort of action. Communities that have climate action plans completed or underway also have demonstrated this commitment as are municipalities that are signatories to the 2016 Metropolitan Area Planning Council's (MAPC) Metro Mayors Coalition Climate Mitigation Commitment.

To meet this requirement, Climate Leader applicants shall submit one of the following:

- Certified minutes from the meeting in which the clean energy/climate resolution took place, along with the resolution itself; or
- A copy of the executive summary and a weblink from a completed climate action plan, or if the process is still
 underway, a brief description of what has been accomplished and a weblink to the municipality's climate action
 website; or
- An affirmation from the municipal Chief Executive Officer that the city or town remains committed to the goals articulated in <u>the Metro Mayors Coalition Climate Mitigation Commitment</u>.

Municipal Decarbonization Roadmap

Second, the town or city must develop a decarbonization roadmap addressing emissions from municipal operations. The roadmap should focus on eliminating the use of onsite fossil fuels by municipal buildings and vehicles, using a "Zero Over Time" approach as described in Section 2. Roadmaps should include elements that address "trigger events," including equipment replacement, roof replacement, change of use, substantial renovation, etc., in conjunction with evaluating electrification of heat, solar and storage opportunities. Municipalities shall ensure that GHG reductions, energy efficiency, renewable and clean energy, and emissions reduction strategies are incorporated into any decision municipalities make with respect to equipment replacement, capital spending and master planning efforts in support of the community's goals. Municipalities with local public schools shall include school facilities and vehicles in their roadmaps; those that are part of a regional school district shall include those facilities that are included in their most recent Green Communities baseline.

The decarbonization roadmap shall include guiding principles for the following:

For existing buildings:

- I. All comprehensive energy projects and building renovations where electrical, heating, cooking, ventilation, or air conditioning infrastructure are included in the project scope, shall include the following:
 - a. Include as a design option an alternative to fossil fuels for thermal energy that includes low- or zerocarbon fuels or alternative electricity technologies.
 - b. When such options are not practicable, projects shall ensure that steps are taken to develop and incorporate plans to facilitate the future transition to low- or zero-carbon fuels.
 - c. Evaluate building envelope upgrades and implement said upgrades where technically and fiscally feasible.
 - d. Establish and adhere to a low target energy use intensity for overall building or site performance.
 - e. Where appropriate, design and install renewable energy and energy storage, while building the infrastructure necessary to support future renewable energy and storage installations.
 - f. Maximize resilient design to protect critical infrastructure and continued operation when modeled for long-term climate impacts.

For new construction or substantial renovation:

- II. To maximize the potential greenhouse gas emissions reductions, new construction, and substantial renovations, where possible and when cost-effective, shall include the following:
 - a. Strive to achieve zero net energy, where sufficient renewable energy is generated onsite to offset the building's annualized energy consumption.
 - b. Implement energy storage wherever possible, especially when paired with onsite renewables.
 - c. Prioritize sites that provide access to public transportation and alternative modes of transportation.
 - d. Evaluate and implement strategies to reduce embodied carbon contained in building materials.

For municipal and school fleets:

While Climate Leader communities will have adopted the **Zero-Emission-Vehicle First** policy and the Commonwealth will achieve increases in electric vehicle sales through the implementation of vehicle emissions standards that will require all passenger vehicle sales and most medium- and heavy-duty vehicle sales to be electric by 2035, municipal decarbonization roadmaps must include plans for replacing vehicles powered by gasoline and diesel with zero-emission vehicles upon retirement.

Minimum Emission Reduction Timeline

Targets	2027	2030	2040	2050
Reduce emissions from onsite fossil fuels	-20%	-35%	-60%	-100%
Zero emission vehicles (ZEVs) in light-duty fleet adoption	5%	20%	75%	100%
Zero emission vehicles (ZEVs) in heavy-duty fleet adoption	0%	20%	50%	100%
Energy Use Intensity reduction (deep energy retrofits/retro	-20%	-25%	-25%	-30%
commissioning)				
Total Emissions Reduction Goals (% of 2022 emissions)	>15%	>35%	>65%	>95%
	•			

The Decarbonization Roadmap shall also include the following elements:

- (1) Establish a greenhouse gas emission baseline that includes all municipal buildings, school buildings, municipal and school vehicle fleets, street and traffic lighting, drinking water and wastewater treatment plants, pumping stations, and open spaces¹ owned by the municipality. Municipalities shall use fiscal year 2022 for their emissions baseline.
 - Divisions and departments operating as <u>Enterprise Funds under MGL Chapter 44, Section 53F ½</u> where such services are provided by a third-party contractor or where the sole operating and budget authority resides with a board or commission may be excluded from the municipal decarbonization roadmap. However, these operations are encouraged to become a part of and to adopt the roadmap. The exclusion does not apply to any other existing or future division or department operating as an Enterprise Fund for which the municipality has direct authority over its operation.
 - The greenhouse gas emission baseline should be in tons of Metric Tons of CO₂ Equivalent (MTCO2e). There are several acceptable tools for calculating the municipal GHG baseline including:
 - a. Department of Energy Resources (DOER)'s MassEnergyInsight (MEI)
 - b. <u>Energy</u> Star Portfolio Manager
 - c. ICLEI software
 - d. Other tools proposed by the municipality and deemed acceptable by DOER²

Note municipalities are highly encouraged to use MassEnergyInsight, which will include tools and resources to facilitate building and vehicular emissions tracking.

(2) Develop a roadmap to eliminate the use of onsite fossil fuels by municipal operations by 2050. DOER encourages communities to use the "Zero Over Time" approach highlighted in the Rocky Mountain Institute's Guide <u>Best Practices for Achieving Zero Over Time for Building Portfolios</u> that uses triggering events, such as the end of life of HVAC equipment, building renovation, roof replacement, projects in the community's capital improvement plan, etc. The roadmap should include interventions that reduce the use of fossil fuels onsite by utilizing the information provided above and identify when the interventions will take place. It should also set interim goals for calendar years 2030 and 2040.

For the purposes of Climate Leader Communities certification, the roadmap does not need to include detailed energy engineering and analysis. It should be developed and used as a planning tool to inform municipalities of opportunities

¹ The "Open Space" category includes energy use by parking lots, parks, cemeteries, EV charging infrastructure, and athletic fields.

² Municipalities should contact their RC for guidance on approving other tools.

to switch from onsite fossil fuel use. To prepare for roadmap development, municipalities should conduct an inventory of all its facilities. This inventory should encompass at least 75% of the municipality's building emissions. This shall include:

- Age of building
- Square footage of conditioned space
- Use profile
- Fuel for heating/hot water and cooling (if any)
- Age & condition of HVAC
- Age & condition of building envelope
- Age, condition, and type of kitchen equipment
- Future plans for facility

Users of MassEnergyInsight should ensure facility characteristics are included in their accounts. This will facilitate the software's ability to generate emissions reduction estimates on future efficiency upgrades and electrification.

Municipalities should also gather information regarding capital improvement plans, facility master plans, fleet vehicle replacement plans, and other pertinent materials affecting its municipal and school facilities.

INSTRUCTIONS FOR CREATING A DECARBONIZATION ROADMAP

A comprehensive roadmap consists of several key components which enables a municipality to establish strategic electrification goals and develop a structure to meet those goals over a period of time. The outline below provides the format for the roadmap and addresses its key components.

DOER has created a **Trigger Event Worksheet** for use as a planning tool to identify opportunities to enhance a facility's energy efficiency and prepare for decarbonization.

DECARONIZATION ROADMAP OUTLINE

I. PURPOSE AND ACKNOWLEDGEMENTS

A. Letters from both general government and school district verifying adoption of the roadmap

- **General Government** The municipality must provide a letter from its Chief Executive Officer of the city or town stating that it has adopted the decarbonization roadmap. The Chief Executive Officer is defined as the manager in any city having a manager and, in any town, having a city form of government, for example the Mayor in any town or city, and the Board of Selectmen in any town unless some other officer or body is designated to perform the functions of a Chief Executive Officer under the provisions of a local charter or laws having the force of a charter. See sample letter in Appendix A.
- **Public School Districts** For a municipality to meet this requirement, its public school district must be included in the municipality's baseline. Furthermore, the public school district must provide a letter from the Superintendent of Schools stating that is has adopted the decarbonization roadmap.
- **Districts** Municipalities that are part of a regional school district are not required to include facilities that are owned and/or operated by the district in their baselines and roadmaps. However, given the opportunities for deep energy retrofits and electrification in school buildings, DOER strongly encourages

communities to include at least a portion (e.g., the elementary school resident children attend) of the district to be part of their Climate Leaders certification application. This will allow for Climate Leader Communities grants to be used for clean energy projects at the schools. See <u>Appendix B of the Green</u> <u>Communities Criterion 3 Guidance</u> for instructions. The regional school district must also adopt the decarbonization roadmap.

B. List of contributors that participated in the baseline and roadmap process

II. EXECUTIVE SUMMARY

- **A.***Narrative Summary of the Town* A narrative summary of the Town, including population and any special school accreditations, recent or planned clean energy or climate activities
- **B.***Summary of Municipal Emissions* With respect to municipal emissions, use instructions below to create Table 1 from most recent fiscal year (sample below). Reiterating the Table 1 contents in text is not required.
 - Building Additions and New Construction Please identify any building additions or new construction planned. Note: DOER will not require communities to adjust for building stock changes in the Climate Leaders program. Emissions from all buildings are to be included in the emissions baseline.
 - Total Emissions from Vehicles including school department
 - Water and Sewer identify emissions for water and wastewater processes and distribution as appropriate

Table 1: Summary of metric tons of CO₂ equivalent emissions (MTCO2e) (Sample Data – use information from MEI's Emissions Table Report)

	MTC02e	Ownership
Buildings		
	1890	Muni
	2566	Regional School District (RSD)
Vehicles		
	2500	Muni
	500	RSD
Water and Sewer	250	Muni

- **Summary of Emissions Reductions Estimated by roadmap Implementation** use sample Table 2 provided below in fill in the "XX's" with estimated category targets attributed to:
 - Electrifying heating
 - o Electrifying municipal and school fleets
 - o Enhancing energy efficiency through retro commissioning, deep energy retrofits, and other measures

In accordance with the Climate Act and the CECP, emissions from electric generation will continue to decline, targeted to fifty three percent (53%) lower in calendar year 2025 over 1990 levels and seventy percent (70%) lower in calendar year 2030. Emissions resulting from municipal operations will decrease as buildings' heating sources transition from fossil fuels and vehicles are powered by a cleaner electric grid.

Table 2: Summary of Municipal Emissions Reductions

Targets	2022	2027	2030	2040	2050
Reduce emissions from onsite fossil fuels via electrification	0%	- <mark>XX</mark> %	- <mark>XX</mark> %	- <mark>XX</mark> %	-100%
Zero emission vehicles (ZEVs) in light-duty fleet adoption	XX%	XX%	XX%	XX%	100%
(% of fleet)					
Zero emission vehicles (ZEVs) in heavy-duty fleet adoption	XX%	XX%	<mark>XX</mark> %	XX%	100%
(% of fleet)					
	EUI**	EUI	EUI	EUI	-30%
Energy Use Intensity reduction (deep energy retrofits/retro		(target	(target	(target	
commissioning)		20% reduction)	25% reduction)	25% reduction)	
Total Emissions Reduction Goals (% of 2022 emissions)	0%	>15%	>35%	>65%	>95%

** Enter FY2022 total average weather normalized EUI in first box

from MassEnergyInsight report

III. MUNICIPAL EMISSION BASELINE

A. Identification of the Inventory Tool Used (preferably MassEnergyInsight)

B. Municipal Emission for the Baseline Year

- Provide a table reporting emissions use by facility. MassEnergyInsight users can download the *"Municipal Emissions"* report from MassEnergyInsight. Climate Leader applicants must ensure municipal energy data is up to date in MassEnergyInsight. All buildings, vehicles, and facilities must be included; vehicle emission data can be aggregated.
- Non-MassEnergyInsight users create a table that includes facility energy consumption by fuel plus emissions using the conversion formulas below.

CO2 Emissions per Unit (metric tons, MTe)	2022	2025 (projected)	2030 (projected)	2040 (projected)	2050 (projected)
Electricity (kWh)	0.0002345	0.0002195	0.0001184	0.0000485	0.0000150
Natural Gas (therms)	0.00531	0.00531	0.00531	0.00531	0.00531
Oil Savings (gallons)	0.01015	0.01015	0.01015	0.01015	0.01015
Gasoline (gallons)	0.00886	0.00886	0.00886	0.00886	0.00886
Diesel (gallons)	0.01015	0.01015	0.01015	0.01015	0.01015
Propane (gallons)	0.00576	0.00576	0.00576	0.00576	0.00576

Source: MA EEA

IV.DECARBONIZATION ROADMAP NARRATIVE

A. Summary –

1. Overview of Goals for implementation to 2027 and 2030,

- 2. Overview of Goals for calendar years 2040 and 2050
- 3. Identify Areas of highest emissions and greatest opportunities for impact
- **B.** Achieving Elimination of Onsite Fossil Fuel Use by 2050 Plans using the "Zero Over Time"³approach should identify triggering events for high-impact buildings and include appropriate clean energy actions (energy efficiency enhancement, electrification, on site renewables and storage) to deploy and projected emissions reduction resulting from the intervention. It is not necessary to perform this exercise for ALL facilities at this time, but it is expected that facilities contributing at least seventy-five percent (75%) of the municipality's aggregate emissions from buildings would be included.

In municipalities with a substantial proportion of emissions resulting from vehicles, it is expected that the roadmap would highlight transitioning vehicles to zero-emission models.

MassEnergyInsight users will be able to use the platform to generate estimated emission reductions from building interventions.

Municipalities may also use other tools that estimate emission reductions from efficiency measures and building electrification.

Municipalities should also consider behind the meter solar and battery storage as appropriate during building triggering events.

- **C.** *Program Management Plan for Implementation, Monitoring and Oversight* Identify the personnel responsible both for oversight of the roadmap implementation and for implementation of clean energy actions in specific departments or buildings, if applicable.
- **D.** Update Roadmap every 3 years Recognizing the rapid development of clean energy technologies and the everchanging needs of municipalities, communities seeking to remain certified as a Climate Leader Communities shall update their roadmaps after three years.

³ In addition to RMI's <u>Guide</u>, municipalities may find the New Building's Institute's (NBI) <u>Decarbonization Roadmap Guide for School Building</u> <u>Decision Makers</u> useful. The NBI website also has a wealth of tools and resources, including a link to its <u>Getting to Zero Resource Hub</u>

APPENDIX A – Sample Letters from Both General Government and School District Verifying Adoption of the roadmap

General Government – The general government must provide a letter from the Chief Executive Officer of the city or town stating that it has adopted the municipal decarbonization roadmap. The Chief Executive Officer is defined as the manager in any city having a manager and, in any town, having a city form of government, the Mayor in any other city, and the Board of Selectmen in any other town unless some other officer or body is designated to perform the functions of a Chief Executive Officer under the provisions of a local charter or laws having the force of a charter.

On Town/City Letterhead

September 15, 20xx

To Whom It May Concern:

Please be advised that on September 12, 20xx, the Select board of the Town met at a duly noticed and regularly scheduled meeting and voted to adopt⁴ the decarbonization roadmap of the Green Communities Division's Climate Leaders Application for Certification. The Select board was given copies of the plan for review prior to the meeting.

The Select board voted unanimously to adopt the plan and the minutes of that meeting include the vote.

Sincerely,

[signature]

Select board Members and/or Chair, Mayor, or Town Manager

On School District Letterhead

September 15, 20xx

To Whom It May Concern:

Please be advised that the town/city/regional school district adopts the decarbonization roadmap as part of the city/town's Green Communities Division's Application for Climate Leaders Certification.

Sincerely,

[signature]

School Superintendent

⁴ The verbs "approve," "committed," or "adopt" are acceptable to indicate town/city and school board adoption of the roadmap. The verbs "endorse", or "support" are NOT sufficient indications of town/city and school board adoption.



CLIMATE LEADER COMMUNITIES CERTIFICATION AND GRANT PROGRAM



PROGRAM GUIDANCE

INTRODUCTION

The Green Communities Act of 2008 established the Green Communities Designation and Grant Program, creating the framework for achieving designation status and awarding grant funds to municipalities for energy efficiency projects. Since then, the vast majority of Massachusetts municipalities have voluntarily become designated Green Communities, partnering with DOER on hundreds of projects resulting in energy and costs savings.

However, the goals articulated in the 2021 Climate Law and the Massachusetts Clean Energy and Climate Plan for 2025 and 2030 (CECP) pivot the focus from energy reduction to greenhouse gas reduction. As a result, DOER's programs supporting municipalities are also pivoting. The Climate Leader Communities certification program, evolving from the Green Communities program, creates a new voluntary framework for meeting these goals by providing tools and resources to help municipalities reduce emissions by electrifying non-electric energy uses and maximizing the efficiency of buildings and transportation. The following guidance describes the Green Communities Division's Climate Leader Communities Certification and Grant Program process (pursuant to M.G.L.c. 25A §10 (b)).

Becoming certified as a Climate Leader Community provides access to grant funding to a municipality to support all or a portion of the cost of:

- studying, designing, constructing and implementing energy efficiency activities including, but not limited to, energy efficiency measures and projects;
- procuring energy management services;
- adopting energy efficiency policies; and,
- siting activities related to and construction of renewable energy generating facilities on municipally owned property.

The Climate Leader Community Certification process requires a sequence of steps:

- 1) To understand all the requirements of becoming a Climate Leader Community, it is important to review the detailed guidance for each requirement, which can be found at the Climate Leader Community Certification and Grant Program page of DOER's website.
- 2) A municipality applies to DOER's Green Communities Division (the, "Division") for certification that they have demonstrated compliance with the requirements established by the Division to become a Climate Leader Community. These requirements, along with documentation submission guidelines, are outlined in this document. Please note: if all the required documents listed are not included as part of the submission, the Division reserves the right to reject the application in its entirety.
- 3) The Division reviews the application and determines whether a municipality meets the requirements. The Division then informs the municipality of its decision. If certified a Climate Leader Community, the

municipality will be informed, and will be eligible for enhanced grant funding opportunities through the Green Communities Division.

4) Climate Leader Communities will be required to recertify every three (3) years by updating their roadmaps AND demonstrating that they have implemented at least one activity from the Climate Leader Communities Best Practices List. When recertifying for the first time, Climate Leaders will need to select a best practice from the Community Engagement category.

INSTRUCTIONS

Certification Application (Required)

To receive official certification, the applicant must complete the Climate Leader Certification Application and submit it to the Division for review. Once the Division has completed its review, it will notify the applicant whether it has been certified a Climate Leader Community.

Deadline for Certification Application

Certification applications for fiscal year 2025 will be accepted through June 30, 2024. Applications must have all post-review issues resolved by August 16, 2024, to be considered for certification.

To apply: Application is an entirely online process; no hard copies of any documents are to be submitted. Instructions for applying online will be provided. Contact your Green Communities Regional Coordinator for access to the Climate Leader Communities Online Certification Application system.

Grant Application (Required for funding)

Once certified each Climate Leader is eligible to submit a proposal for the use of its enhanced grant funding via the Green Communities competitive grants. Certified Climate Leader Communities must fill out a grant application (provided by DOER) and submit it for consideration.

Grant awards resulting from this process will be governed by 815 CMR 2.0.



Requirements for Becoming Certified as a Climate Leader Community

REQUIREMENTS FOR MEETING THE CRITERIA TO BE CERTIFIED AS A CLIMATE LEADER COMMUNITY

A municipality must do ALL the following:

REQUIREMENT #1: MUST BE A GREEN COMMUNITY IN "GOOD STANDING"

A municipality seeking Climate Leader Community certification must be an existing Green Community in good standing as documented by the most recent fiscal year's Green Communities Annual Report. The Annual Report shall demonstrate the municipality continues to meet the five Green Communities Designation Criteria as established by M.G.L Ch. 25A Sec. 10 (c). Municipalities shall be considered to be in "good standing" if they:

- Maintain the zoning provisions that established the as-of-right siting of a) renewable or alternative energy generating facilities; or b) renewable or alternative energy research and development (R&D) facilities; or c) renewable or alternative energy manufacturing facilities in their Green Communities Designation application for meeting Criterion 1.
- Maintain the expedited application and permitting process under which Criterion 1 facilities may be sited within the municipality, in accordance with the Green Communities Designation application for meeting Criterion 2. Municipalities with active moratoriums on the permitting of ground-mounted solar PV systems and/or battery energy storage systems are NOT considered be in "good standing" for the purpose of Climate Leader certification.
- Provide updated data related to the municipality's energy usage and progress toward its twenty percent (20%) percent energy reduction goal, in accordance with its Energy Reduction Plan submitted to meet Green Communities Designation Criterion 3.
- Maintain adherence to the municipality's Fuel-Efficient Vehicle Policy, in accordance with Green Communities Designation Criterion 4.
- Comply with the requirements of the Stretch Energy Code (225 CMR 22 and 23), in accordance with Green Communities Criterion 5

Documentation Required

Submission and approval of the most recent Green Communities Annual Report

REQUIREMENT #2; ESTABLISH/MAINTAIN A LOCAL COMMITTEE TO ADVISE, COORDINATE, AND/OR LEAD CLEAN ENERGY AND CLIMATE ACTIVITIES

Municipalities must either establish or maintain a local committee that advises and helps to coordinate clean energy and climate activities in the municipality.

Municipalities that do not have such a committee can establish the local committee by City Council or Select Board vote, as appropriate. Members of the local committee may be appointed from municipal staff and departments, elected officials, volunteer members of community boards and commissions, as well as interested residents. It is also important to include representation from local and regional public schools.

Communities may also work with existing community organizations to help implement clean energy/climate programs. Municipal governments will need to adopt a resolution recognizing the collaboration between the local government and the nonprofit organization. The resolution should authorize the partner to pursue Climate Leader certification in partnership with the community.

Documentation Required

To satisfy the local Climate Team requirement with an existing committee, applicants must submit the following:

- Name of committee, list and affiliation of current members
- The mission or charge of the committee
- Agendas and minutes from the previous six months
- A summary of activities undertaken in the past twelve months

To satisfy the local Climate Team requirement with a recently formed committee, applicants must submit the following:

- Minutes from City Council or Select Board meeting establishing Climate Team
- Name of committee, list and affiliation of current members
- The mission or charge of the committee
- Planned meeting schedule and goals for first year

To satisfy the local Climate Team requirement by partnering with a local non-profit community organization, applicants must submit the following:

- Resolution by City Council or Select Board recognizing the collaboration between the municipality and the nonprofit organization
- Memorandum of Understanding between the municipality and community organization identifying partnership goals and proposed tasks undertaken by the organization for the following twelve months
- Designation of at least one municipal staff member as a point of contact

Guidance Materials:

Team Guidance Document

REQUIREMENT #3: MUNICIPAL DECARBONIZATION COMMITMENT

Municipalities seeking Climate Leader Community certification must commit to eliminating on-site fossil fuel use¹ by the municipality by 2050.

Documentation Required for Municipal Decarbonization Commitment

To meet this requirement, Climate Leader applicants shall submit one of the following:

- Certified minutes from the meeting in which the clean energy/climate resolution took place, along with the resolution itself
- A copy of the executive summary and a weblink from a completed climate action plan, or if the process is still underway, a brief description of what has been accomplished and a weblink to the municipality's climate action website
- An affirmation from the municipal Chief Executive Officer that the city or town remains committed to the goals articulated in the <u>Metro Mayors Coalition Climate Mitigation Commitment</u>.

REQUIREMENT #4: MUNICIPAL DECARBONIZATION ROADMAP

Municipalities seeking Climate Leader Community certification must develop a roadmap for decarbonizing municipal operations (which includes town and school buildings, drinking water and wastewater treatment plants, pumping stations, open spaces, and vehicles).

Consistent with the goals established by *Executive Order 594* governing emission reductions for state government, municipal decarbonization roadmaps should focus on eliminating the use of onsite fossil fuels in buildings and vehicles, using a "Zero Over Time" approach that addresses "trigger events" such as but not limited to, equipment replacement, roof replacement, change of use, substantial renovation, etc., in conjunction with evaluating electrification of heat, solar and storage opportunities. Municipalities shall ensure that greenhouse gas (GHG) reductions, energy efficiency, renewable and clean energy, and emissions reduction strategies are incorporated into their equipment replacement and capital and master planning efforts in support of the community's goals. Municipalities with local public schools must include school facilities and vehicles in their roadmaps; those that are part of a regional school district may include those facilities.

Guidance Materials:

Municipal Decarbonization Guidance Documents

¹ On-site fossil fuel use includes municipal buildings, municipal vehicles, as well as school district buildings and vehicles included in the municipal portfolio.

Documentation Required for Municipal Decarbonization Roadmap

The municipality must provide a copy of its roadmap for eliminating the use of onsite fossil fuels for municipal operations by 2050. At a minimum, the roadmap must include the following information:

- Identification of the greenhouse gas emission (GHG) inventory tool used
- The emissions generated by buildings, vehicles, and water/sewer operations
- Specific emission reduction measures to be implemented as indicated by "triggering events" to reduce the use of onsite fossil fuels in buildings and vehicles by at least 25 percent by 2030, and a timeline with milestones to implement additional measures to transition away from the use of onsite fossil fuels by 2050.
- Documentation that both the municipal government and local school district have adopted the roadmap. If a regional school district is included as part of the certification, documentation that the regional school district has adopted the roadmap must be included.

REQUIREMENT #5: ZERO-EMISSION-VEHICLE FIRST POLICY

All Departments in the municipality must purchase only zero-emission vehicles for municipal use whenever such vehicles are commercially available and practicable.

Documentation Required

The following documentation must be provided as evidence that the municipality has met this criterion:

- Copy of the policy or other mechanism adopted for purchasing only zero-emission vehicles
- A replacement plan for non-exempt vehicles with zero-emission vehicles
- Documentation that both the municipality and the local school district have adopted the zero-emission vehicle policy. If a regional school district is included as part of the certification process documentation that the regional school district has adopted the zero-emission vehicle policy must be included.

Guidance Materials:

ZEV First Policy Guideline documents

REQUIREMENT #6: SPECIALIZED STRETCH ENERGY CODE ADOPTION

Communities seeking Climate Leader certification must adopt the Specialized Energy Code. The Specialized Code is required (<u>M.G.L Ch. 25A Section 6</u>) to be designed to achieve Massachusetts GHG emission limits and sub-limits set every five years from 2025 to 2050. As a result, all compliance pathways under the Specialized Code are designed to ensure new construction that is consistent with 2050 net-zero goals, primarily through deep energy efficiency, reduced heating loads, and efficient electrification.

The recommended way for cities and towns to meet this requirement is by adopting the Specialized Code (the entirety of 225 CMR 22 and 23 including Appendices RC and CC) and are directed to do so in the manner prescribed by law. The code may also be rescinded by any municipality in the manner prescribed by law.

Towns are advised to adopt the Specialized Code as a general bylaw at Town Meeting. Cities are advised to adopt the Specialized Code by general ordinance voted by City Council.

Documentation Required

The municipality must provide documentation of the city council or town meeting vote adopting the entirety of 225 CMR 22 and 23 including Appendices RC and CC. *The vote must include the effective date of the Specialized Energy Code.*

IMPORTANT LINKS

Specialized Code Guidance Documents

RECERTIFICATION REQUIREMENTS – IMPLEMENTATION OF BEST PRACTICES

Municipalities that become Climate Leader Communities are expected to not only address the GHG emissions resulting from municipal operations, but also engage in clean energy/climate activities in their communities and continue to implement best practices the promote climate mitigation and clean energy adoption.

Grant funds from Climate Leader Communities grants are available to support these initiatives, as well as other funding sources from EEA and its agencies. Municipalities seeking to maintain their Climate Leader Communities certification status will be required to apply for recertification every three years by updating their roadmaps and implementing one Climate Leader Best Practice. For the first recertification cycle, the best practice shall be selected from the Community Engagement Category. The Best Practices Toolkit is available on the Climate Leader Communities communities website.

Climate Leaders ZEV first recommendation

Truro Energy Committee

On June 29, 2023 the SB updated policies 43 and 55 adding electric vehicle first language in order to satisfy the ZEV first policy for Climate Leaders (Green Communities 2.0) and qualify for the concomitant grants starting ca July 1, 2024

We can leave those policies in place as revised.

Policy # 43 Vehicle maintenance and replacement policy

<u>https://www.truro-</u> <u>ma.gov/sites/g/files/vyhlif9766/f/uploads/policy_43_vehicle_maintenance_and_replace</u> <u>ment_policy_changes-6.2023.pdf</u>

Policy #55 Replacement of police vehicles

<u>https://www.truro-</u> <u>ma.gov/sites/g/files/vyhlif9766/f/uploads/policy_43_vehicle_maintenance_and_replace</u> <u>ment_policy_changes-6.2023.pdf</u>

In order to become Climate Leaders (Green Communities 2.0) and qualify for the concomitant grants starting ca July 1, 2024 it would be best to replace Policy # 46 Fuel efficiency policy

https://www.truro-

ma.gov/sites/g/files/vyhlif9766/f/uploads/policy 46 fuel efficient vehicle policy revis ed_changes.pdf

After this year's ATM warrant is complete the EC will provide the documents and templates to replace Policy #46. Green Communities also included a sample letter from the Town to the Green Communities to accompany the EV first https://www.mass.gov/doc/climate-leader-communities-zev-first-policy/download

Green Communities will be providing grants to pay for Municipal Building decarbonization Road Map another Climate Leaders requirement needed soon.

GC will notify us when the grants are available.



Climate Leader Communities GUIDANCE Zero-Emission-First Vehicle Policy



INTRODUCTION

In 2021 <u>An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy</u> amended the Global Warming Solutions Act of 2008 and requires the Secretary of Energy and Environmental Affairs to set limits on greenhouse gas (GHG) emissions for 2025 and 2030, including both economy-wide emissions reduction requirements and specific limits on major sources of global warming pollution.

Transportation is the largest source of GHG emissions in the Commonwealth, responsible for 37% of statewide emissions in 2020. The <u>2025/2030 Clean Energy Climate Plan (CECP)</u> presents primary strategies to reduce pollution from the transportation sector including: (1) reducing growth in total vehicle miles travelled (VMT) by improving alternatives to personal vehicles and (2) transitioning most vehicles on the road to electric vehicles (EVs).

Municipalities seeking Climate Leader Community certification are to demonstrate their commitment to GHG emission reductions by replacing fleet vehicles powered by fossil fuels over time with those that are powered by electricity or other means that emit no greenhouse gases.

COMPLIANCE

To meet this requirement, municipalities need to adopt by action of the local official or body with authority to enact municipal policies a written Zero-Emission Vehicle First policy that requires municipal departments and divisions to purchase only zero-emission vehicles (*See Appendix A, Model Policy*). Both general government and school districts are required to enact a Zero-Emission Vehicle First policy for a municipality to meet this requirement, and letters documenting adoption must be provided and signed by the appropriate municipal authorities, as noted below. Letters from other municipal officials are not acceptable.

For letters from the general government and school district:

• **General Government** – The general government must provide a letter from the Chief Executive Officer of the city or town stating that it has adopted the Zero-Emission First Vehicle Policy. The Chief Executive Officer is defined as the manager in any city having a manager and, in any town, having a city form of government, the Mayor in any other city, and the Board of Selectmen in any other town unless some other officer or body is designated to perform the functions of a Chief Executive Officer under the provisions of a local charter or laws having the force of a charter.

• **Public School Districts** - For a municipality to meet this requirement, its public school district must provide a letter from the School Superintendent stating that it has adopted the Zero-Emission-Vehicle First Policy. Please note that even if the school has no vehicles, or only has vehicles that are exempt from the Policy, adoption of the Policy by the school must be provided since the school may acquire non-exempt vehicles in the future.

• **Regional School Districts** – Regional School Districts that are part of a municipality's energy baseline and participate in the Green Communities grant program must also adopt the Zero-Emission-Vehicle First Policy and provide a letter from the Superintendent stating that it has adopted the Policy.

Sample adoption letters are provided in Appendices B and C.

In addition, the municipality is required to develop and maintain a vehicle inventory for all on-road four-wheeled vehicles, both exempt and non-exempt. A plan for replacing non-exempt vehicles with vehicles that meet the policy must also be developed and maintained. This inventory of all vehicles and replacement plan for non-exempt vehicles must include school vehicles as applicable.¹

While exempt vehicles are not required *at this time* to meet the zero-emission requirements, exempt vehicle purchases should prioritize the most fuel-efficient model available and consider fuel-reduction and emissions-reduction technology, such as diesel particle filters, selective catalytic reduction systems, exhaust gas recirculation, NOx adsorbers, oxidation catalysts, anti-idling devices, etc.

Where the municipality or school district contracts vehicle services, it should seek out companies for competitive bidding that offer the use of electric and/or fuel-efficient vehicles.

FLEET EV CHARGING INFRASTRUCTURE

Prior to the procurement of battery electric vehicles (BEVs) or plug-in hybrid electric vehicles (PHEVs), municipalities should confirm whether additional EV charging capacity is required and feasible to support new vehicles. Where space or capacity is limited, sites may require flexibility in the use of planned or existing EV charging stations. Municipalities should also seek to leverage grants and incentives to support the cost of new EV charging infrastructure and equipment.

VEHICLE PROCUREMENT

These zero-emission vehicles (ZEV) acquisition requirements are intended to eliminate the combustion of fossil fuels in fleets through the transition to zero-emission technologies, thereby supporting broader emissions reductions in the community. When a vehicle is identified for replacement, acquisitions of ZEVs must be prioritized over vehicles powered primarily by internal combustion engines utilizing fossil fuels. Acquisitions must adhere to the following vehicle efficiency hierarchy:

- Priority 1: BEVs (and fuel cell electric vehicles (FCEVs))
- Priority 2: PHEVs
- Priority 3: Hybrid electric vehicles (HEVs)
- Priority 4: Most fuel-efficient internal combustion or vehicles that run on alternative fuels in accordance with requirements of the Green Communities Fuel Efficient Policy

As the numbers and types for zero-emission vehicles are released in the marketplace, the ZEV purchasing requirements will be revised accordingly. Those acquiring vehicles should check this Guidance for updates prior to ordering new vehicles.

INVENTORY

Municipalities are required to maintain an annual vehicle inventory for ALL vehicles and a plan for replacing any vehicles with vehicles that adhere to the ZEV hierarchy.

¹ This includes municipalities with local public-school districts and municipalities that include regional school districts in their Green Communities energy baseline.

Climate Leader Communities utilizing MEI and maintaining the full municipal fleet within the database will have met this requirement for the ZEV policy.

To inform your purchasing decisions, information on makes and models of vehicles, including fuel economy comparisons, can be found at: <u>http://www.fueleconomy.gov</u> We encourage use of this valuable resource for informing decisions as well as statewide contract VEH110.

VEHICLE RECYCLING

Recycling of vehicles – i.e., moving a previously purchased and used vehicle from one municipal department to another municipal department in need of a vehicle is only allowed if the vehicle being recycled to a new department is more fuel efficient than the vehicle it is replacing.

APPLICABILITY

All Municipalities seeking Climate Leader Communities certification must adopt a Zero-Emission-Vehicle First Policy.

Future Financial Considerations

Contingency language regarding potential future budgetary constraints in Zero-Emission Vehicle First Policies will not be accepted. DOER recognizes that predicting and committing future budgets is difficult and will work with municipalities on a case-by-case basis should they encounter difficulty complying with their Policy due to a budget issue in a particular year.

FOR MORE INFORMATION

Websites:

www.fueleconomy.gov

Electric vehicle resources and calculators offered by DOER's Leading by Example Program
Leading by Example Clean Transportation

Statewide contract VEH110

"Purchase of Light Duty Vehicles: Passenger Cars, SUVs, Trucks, Vans, SSVs and PPVs" located on <u>https://www.commbuys.com</u>. Contact your <u>Regional Coordinator</u>

APPENDIX A – Model Zero-Emission Vehicle First Policy

This model policy was prepared to assist municipalities in developing a zero-emission-first vehicle policy. This model policy is intended for illustration purposes. Communities are free to utilize the format provided.

	NAisia alita / Cala al Distaiat				
Municipality / School District					
ZERO EMISSION FIRST VEHICLE POLICY					
Effective Date					
Revisions					
Select Board					
Approval Date					
School					
Superintendent					
Approval Date					

1) **DEFINITIONS**

- a) Acquisition In the context of this guideline, acquisition refers to the purchase or lease of on-road vehicles (whether used or new) by and for the (city/town/school district) either to replace an existing fleet vehicle or to expand a fleet.
- b) Alternative fuel vehicles (AFVs) Dedicated, flexible fuel, or dual-fuel vehicles designed to operate on at least one alternative fuel (such as electricity, biodiesel, propane, or natural gas) to reduce carbon emissions.
- c) Battery electric vehicle (BEV) An electric vehicle that draws propulsion energy solely from an onboard electrical energy storage device during operation that is charged from an external source of electricity.
- d) Electric vehicle supply equipment (EVSE) or electric vehicle charging station An electric component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles by permitting the transfer of electric energy to a battery or other storage device in an electric vehicle.
- e) Exempt vehicles Vehicles that are exempt from the Green Communities <u>Fuel Efficient Vehicle Policy</u> include off-road vehicles, motorcycles and heavy-duty vehicles with a manufacturer's gross vehicle weight rating (GVWR) of more than 8,500 pounds. Examples include fire engines, ambulances, and some public works vehicles.
- f) Fleet vehicles In the context of this guideline, refers to on road vehicle assets owned or leased and operated by the (city/town/school district).

- g) **Fuel-cell electric vehicle (FCEV or FCV)** An electric vehicle that draws propulsion energy solely from an on-board energy storage device during operation, where energy stored as hydrogen is converted to electricity by a fuel cell, that is recharged from an external source of hydrogen.
- h) Fuel Efficient Vehicle (FEV) Policy Issued by the Department of Energy Resources (DOER) to fulfill the requirements of the Green Communities Act. The <u>FEV Policy</u> requires designated Green Communities to acquire fuel-efficient vehicles; applies to all light-duty vehicle acquisitions with a gross vehicle weight rating (GVWR) of 8,500 pounds or less.
- i) **Gross vehicle weight rating (GVWR)** The maximum safe operating weight of a vehicle, as specified by the manufacturer, including passenger and cargo loads.
- j) Heavy-duty vehicle A vehicle with a manufacturer's gross vehicle weight rating (GVWR) of more than 8,500 pounds.
- k) Hybrid electric vehicle (HEV) Powered by an internal combustion engine and a small electric motor that uses energy stored in a battery. Under light load, for instance during initial acceleration, only electricity is consumed. The vehicle is typically fueled with gasoline to operate the internal combustion engine, and the battery is charged through the engine and regenerative braking, not by plugging in.
- I) Light-duty vehicle- A vehicle with a GVWR of less than 8,500 pounds.
- m) **Plug-in hybrid electric vehicle (PHEV)** An electric vehicle with an on-board electrical energy storage device that can be recharged from an external source of electricity and that also has the capability to run on another fuel.
- n) **Telematics** A system that is installed in a vehicle that records and transmits information about the vehicle such as the current odometer, maintenance needs, and fuel/electricity consumption.
- o) Zero emission vehicle (ZEV) Zero emission vehicles include battery electric vehicles, plug-in hybrid electric vehicles, and fuel-cell electric vehicles; if the most recent definition of ZEVs per the Massachusetts Zero Emission Vehicle Commission diverges from this scope, the Commission definition shall take precedence.

PURPOSE

The purpose of the Zero-Emission First Vehicle Policy is to set standards and guidelines for the purchase, operation, and maintenance of the (city/town/school district) fleet vehicles that will advance the economic, energy, and climate sustainability of municipal operations by achieving long-term reductions in energy costs, energy consumption, and greenhouse gas (GHG) emissions. The primary objectives of this policy are to:

- Accelerate the adoption of emissions-reduction technologies and the transition of the fleet to all electric or other environmentally advantageous vehicles
- Minimize the long-term environmental and financial impacts of fleet vehicles
- Optimize the composition of the fleet to achieve maximum fuel efficiency
- Advance the installation of electric charging infrastructure across municipal facilities
- Prioritize the utilization of grants, rebates, and incentives to support the acquisition of vehicles and technologies that will improve efficiency and reduce GHG emissions.

This policy shall not require a department to take any action which conflicts with local, state, or federal requirements nor mandate the procurement of products that do not perform adequately for their intended use, exclude adequate purchasing competition, or require the purchase of vehicles that are not commercially available or practicable.

APPLICABILITY

This policy applies to all divisions and departments of the (city/town/school district). It applies to road-worthy passenger vehicles, pick up and utility trucks, and SUVs. It does not apply to specialized equipment or off-road vehicles.

GUIDELINES VEHICLE PROCUREMENT

Electric-first procurement

Vehicle procurement should be prioritized as follows:

- 1. Battery-electric vehicle (BEV)
- 2. Plug-in hybrid vehicle (PHEV)
- 3. Hybrid electric vehicle (HEV) or other alternative fuel vehicle (AFV)
- 4. Standard vehicle operated by an internal combustion engine fueled by fossil fuels

The fleet policy is electric-first, meaning that electric vehicles shall be prioritized when the (city/town/school district) purchases or leases light-duty vehicles for its operations, followed by plug-in hybrid vehicles, then hybrid electric or other alternative fuel vehicle.

Fuel-efficient requirements for standard vehicles

If it is determined that a ZEV does not meet operational needs, the purchased or leased vehicle must be the most fuel-efficient class, drive train, and model available that will fulfill the intended municipal function. When determining the most fuel-efficient vehicle for a given class, the municipality will utilize the fuel efficiency limits contained in the most <u>recent guidance for the Fuel-Efficient Vehicle Policy</u> established by DOER's Green Communities Division.

I. These limits are based on the most recently published U.S. Environmental Protection Agency combined city and highway MPG ratings (see <u>www.fueleconomy.gov</u>). The EPA maintains a <u>database</u> on vehicle fuel efficiency that is updated throughout the year as new models are released.

Inventory

If the (city/town/school district) is utilizing MEI and maintains the full municipal fleet within the database, they have met this criterion for the ZEV policy. Otherwise, the (city/town/school district) will maintain an annual vehicle inventory for ALL vehicles and a plan for replacing any vehicles with vehicles that adhere to the ZEV hierarchy establish by this policy. The (city/town/school district) will review on an annual basis the Vehicle Inventory, along with this policy to plan for new acquisitions as part of planning for the new fiscal year budget.

The following information shall be included in a vehicle inventory list and said list shall be updated on an annual basis and provided to the Green Communities Division:

Model	Make	Mode l Year	Year/mont h Purchased	Vehicle Fuel Source	Drive System: 2 WD, 4WD or AWD	> 8500 pounds ? (Y or N)	Exempt or non- exempt	MPG Rating	Vehicle Function
Ford	Explorer	2021	01/21	HEV	4WD	N	NE	Hybrid	Police Cruiser
Ford	F250	2016	08/2017	Diesel	4WD	Y	Exempt	N/A	DPW - Maintenanc e
Ford	Focus	2014	07/2014	Gasolin e	2WD	N	NE	32	Assessors
Internationa I	Dump Truck	2011	09/2011	Diesel	RWD	Y	Exempt	N/A	Sander/Sno wplowing
Chevy	Bolt	2022	09/2022	BEV	2WD	N	NE	BEV	Inspector

II. Zero-Emission First Replacement Plan

All vehicles shall be replaced with following the electric-first hierarchy as indicated by this policy. Vehicles shall be replaced when they are no longer operable and will not be recycled from one municipal department to another unless the recycled replacement is more efficient than the vehicle it is replacing. In addition, when considering vehicle replacement, the function of the vehicle will be reviewed for potential replacement with a more fuel-efficient vehicle, including a zero-emission non-exempt vehicle.

III. Questions / Enforcement

All other inquiries should be directed to the department/division responsible for fleet management and/or fleet procurement. This policy is enforced by the Chief Administrative Officer and/or his/her designee(s).

Appendix B – Sample Municipal Government Letter Letter must be on Municipal Letterhead

MA Department of Energy Resources Green Communities Division 100 Cambridge Street – 9th floor Boston, MA 02114

{date of letter}

At a public [AUTHORIZING BODY] meeting held on [DATE], the [AUTHORIZING BODY] voted to adopt the attached Zero-Emission-First Vehicle Policy.

Thank you.

Signature and Typed Name of Chair

Appendix C - Sample School Adoption Letter

Letter must be on School letterhead

MA Department of Energy Resources Green Communities Division 100 Cambridge Street – 9th floor Boston, MA 02114

{date of letter}

Please be advised that the Public Schools of [Municipality] hereby adopted the attached Zero-Emission-First Vehicle Policy.

Thank you.

Signature and Typed Name of Superintendent of Schools

<u>3/7/2024 Discuss and Vote on submitting this Doc to SB and CAC for inclusion in 2024</u> <u>ATM Warrant</u>

TRURO CLIMATE ACTION COMMITTEE

For LCP/ SB inclusion (Voted and approved by CAC 5/14/2022) EC fall 2022 Submitted to LCP 9/12/2023 the LCP will be voted on at 2024 Town Meeting

Whole Government Approach:

The Town of Truro recognizes that effective climate leadership requires the integration of climate change mitigation and adaptation into daily operations, decision- making, and planning for our municipality. The Truro Town government is committed to taking the lead on implementation of this approach and the integration of climate change mitigation and adaptation throughout all Town Departments, boards, and committees and will focus on three specific areas to achieve this:

Governance

Integrate climate change mitigation and adaptation goals, metrics, and evaluation criteria into Town planning and administration, including staff and department training, evaluations, and budgeting.

Education

Work with educators, parents, students, the School Board, and the State to bring climate education curricula into schools and student activities.

Resilience

Prepare businesses and residents for the adverse impacts of climate change through education and preparedness planning.

Departmental Responsibilities.

One of the first objectives is to align Town Departments' responsibilities with the goals of the Climate Action Plan and identify any areas where municipal activities may be in conflict with the goals of the Plan.

This process will result in the incorporation of a climate strategy into the goals of every Town Department's operations and planning.

GOALS AND ACTIONS (Voted and approved by CAC 5/26/2022 EC 9/11/2023)

Purpose

To reduce the community's contribution to climate change, with a focus on ensuring our energy infrastructure is cleaner, leaner, and more resilient. To prepare mitigation actions and adaptation strategies that respond to the anticipated effects of climate change before they occur.

Goal 1: Integrate climate change mitigation and adaptation as a focus for all Town Departments, Boards, and Committees.

- 1. Designate a Town staff position to coordinate with the Energy Committee and the Climate Action Committee other boards, committees, and departments as well as community groups to implement the climate change mitigation and adaptation goals set forth here.
- 2. Create climate change-ready standards and offer training opportunities for Town decision-makers, goal implementers, and committee members.
- 3. Implement the resolution passed at 2020 Town Meeting and any future related ATM Articles that requires regulatory and advisory bodies and the Town to adopt the objective of reducing Truro's net greenhouse gas emissions to zero by 2050 at the latest, and requests the Select Board to direct all departments, officers, committees boards and of the Town to take such immediate measures within the scope of their respective responsibilities and authority as may be necessary and prudent to implement this policy.
- 4. Create, track, and report Department-specific and measurable goals and objectives to implement and succeed with this policy.

Goal 2: Reduce the Town of Truro's non-renewable energy consumption and encourage energy conservation in order to reduce Greenhouse Gas emissions. In alignment with Commonwealth goals, achieve a reduction of greenhouse gas emissions over 1990 levels by at least 50% by 2030, 75% by 2040, and 100% ("net-zero") by 2050.

1. Continue to identify strategies and projects that will help us reach the Green Communities Act goal of reducing non-renewable energy consumption by 20% every five years.

<u>3/7/2024 Discuss and Vote on submitting this Doc to SB and CAC for inclusion in 2024</u> <u>ATM Warrant</u>

- 2. Identify and apply for Green Communities grants, proposing projects that fully maximize potential funding (\$250,000 projects).
- 3. Identify and implement appropriate alternative energy generation on Town properties needed to reduce town fossil fuel reliance and electric energy cost and/or add renewable energy to the regional grid to offset the future demand projected in the Massachusetts 2050 Decarbonization Roadmap
- 4. Reduce "peak hour" energy consumption for town buildings, including investigating the use of battery storage.
- 5. Measure baseline data and maintain ongoing measurement of municipal energy use and corresponding greenhouse gas emissions. (Mass Energy Insight) and use it to inform decisions on potential improvements.
- 6. Inform the public by creating displays of the energy use, emissions, and improvement data mentioned above. (The Truro CAC website offers one publishing opportunity.)
- 7. The Truro Energy Committee and the Truro Climate Action Committee will participate in Long-term Capital planning for municipal buildings, projects and properties to assist in identifying and implementing cost effective climate mitigation and adaptation actions aligned with Town and state goals
- 8. The Energy Committee and the Climate Action Committee will participate in Article votes and Comments on the Annual Town meeting warrant for all Articles related to Climate Change and energy conservation.
- 9. Investigate all alternative energy sources feasible for Truro, e.g., solar, wind, water.

Goal 3: Reduce the Truro community's non-renewable energy consumption and encourage energy conservation for Greenhouse gas emission reductions in alignment with Commonwealth goals, i.e achieve a reduction of greenhouse gas emissions over 1990 levels by at least: 50% by 2030, 75% by 2040 and 100% "net-zero" by 2050.

Note: Truro began tracking municipal emissions in 2009, whole Town emissions in 2020

Measure baseline data and maintain ongoing measurement of community energy use and greenhouse gas emissions. Continue to work toward improved data sources for information needed for the Global Covenant of Mayors, such as resident vehicle information, improved measurement techniques potential improvements to the Assessor's database, and possible state-mandated information from utility companies

1. Promote energy conservation, greenhouse gas reduction technologies, solar panel and air-source heat pump installation for homes and businesses,

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partnering with Cape Light Compact and other regional municipalities and agencies

- 2. Promote ways homes and businesses can reduce "peak hour" consumption, including investigating the use of battery storage.(During peak hours less efficient, higher emitting fossil fuel "peaker" plants make up the energy shortfall)
- 3. Inform the public by creating displays of the energy use, emissions, and our collective progress toward all of these community "net zero" goals.
- 4. Promote the acquisition of electric cars by residents by improving infrastructure (charging stations) and holding a promotional "electric car fair" event, perhaps jointly with neighboring towns.
- 5. Provide information regarding incentive programs by the Commonwealth and other entities for reducing greenhouse gas emissions.

Provide buying opportunities at reduced prices for greenhouse gas reducing technologies for consumers.

Goal 4: Encourage both Town and Community wide climate change preparedness and adaptation.

- 1. Create an ongoing public awareness program to inform all residents of mitigation and adaptation techniques and opportunities.
- 2. Update Truro's vulnerability assessment and develop an action-oriented resiliency plan with grant support from the Massachusetts Executive Office of Energy and Environmental Affairs, *Municipal Vulnerability Preparedness* (*MVP*) *Grant Program*.
- 3. Build on the Town's Hazard Mitigation Plan to reduce vulnerabilities.
- 4. Encourage and coordinate emergency planning at the neighborhood level.
- 5. Work with the Cape Cod Commission and other County entities to develop grant applications for agreed-upon mitigation actions.
- 6. Develop database of grant sources and collaborative grant writing partners.

Voted and approved 5/26/2022 CAC